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METRO SOUTHWEST
SERVICE DELIVERY AREA
(Includes Waltham, Norwood,
Framingham, and Marlboro)

Industry and Occupational Analysis

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COMMONWEALTH OF MASSACHUSETTS

Division of Employment Security

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METRO SOUTHWEST
SERVICE DELIVERY AREA
(Includes Waltham, Norwood, Framingham, and Marlboro)

Industry and Occupational Analysis

Research and Policy Department
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Metro South/West (SDA)

I. Introduction

The Metro South/West Service Delivery Area (SDA) consists of three cities and 40 towns, of which 35 are in the Boston Standard Metropolitan Statistical Area (SMSA). The city of Marlborough and the towns of Stow, Southborough, Maynard and Hudson are in the Marlborough Labor Market Area (LMA). Hopkinton is in the Massachusetts portion of the Providence-Pawtucket, R.I. SMSA; and Littleton is located in the Balance of State - no assigned labor area. Twenty three cities and towns are in Middlesex County, nineteen in Norfolk County, and one town, Southborough, is in Worcester County. The Metro South/West SDA is bordered on the west by the Northern Worcester and Southern Worcester SDA's; on the east by the Metro North, Boston, and South Coastal SDA's; on the south by the Brockton and Bristol County SDA's; and on the north by the Northern Middlesex SDA.

In April 1984, the unemployment rate for the SDA declined to 3.2 percent, a one percentage point decrease from the 4.2 percent unemployment rate recorded one year ago. The Metro South/West SDA has consistently posted the lowest SDA unemployment rate in the State.

A comparison of the Metro South/West SDA unemployment rate with that of the State reveals that the State rate of 5.0 is more than 50 percent higher than the SDA rate. This makes the local employment situation appear even stronger considering that Massachusetts recorded the lowest unemployment rate of the ten largest industrial states. The comparison of the SDA rate of 3.2 percent with the national rate of 7.6 percent reveals the employment opportunities that exist within the SDA.

The SDA labor force consists mainly of professional and white collar workers. This labor force is well educated and mobile, with a mean family income of $32,835.

In addition, the Metro South/West SDA has easy access to excellent transportion facilities including Logan International Airport in Boston, numerous container rail-freight and shipping terminals, and a network of interstate highways to handle the shipping and transportation needs of companies located in the SDA.

Located within the SDA are Routes 128 and 495 which have the heaviest concentration of high technology industries in the state. These highways also afford easy commuting to and from work.

The SDA's proximity to the city of Boston with its financial center, and to leading educational institutes such as MIT and Harvard University also contribute to the area's prosperity.

Thus, the labor force composition, the location, and the density of high technology and defense oriented industries have bolstered the SDA's economy. These combined factors should keep the Metro South/West SDA's unemployment rate the lowest in the State for the forseeable future.

II. Industry Analysis

A detailed analysis of the Metro South/West SDA revealed twelve industries with very favorable prospects for the future: communication equipment; office and computing machines; electronic components and accessories; electrical goods, wholesale; machinery, equipment, and supplies, wholesale; grocery stores; eating and drinking places; personnel supply services; computer and data processing services; miscellaneous business services; nursing and personal care facilities; and hospitals.

Ten of these industries have exceeded the overall employment growth rate of 1.0 percent in the Metro South/West SDA between third quarter 1981 and third quarter 1983. This growth occurred despite the fact that the national economy began a prolonged recession in July 1981 that did not officially end until November 1982. Office and computing machines, and electronic components were included even though they did not meet the established criteria because they represent about 30 percent of Metro South/West manufacturing employment and have recorded dramatic growth through the late 70's and 80's. Both are projected to continue this rapid growth. Since the recession did not have a real adverse effect on the area, overall statistics for the SDA may not show dramatic employment growth compared with the other SDA's in the State. Expectation is that the SDA will continue with steady employment growth.

The Metro South/West has 20 percent of the State's total manufacturing employment. Within the SDA, 69 percent of manufacturing employment is in industries considered to be high technology industries. Just as in the State, manufacturing employment as a share of total employment has declined. The growth industry divisions for the SDA are Wholesale and Retail Trade, and Services. Together these industries account for nearly 50 percent of the SDA's employment.

Employment in the Office and Computing Machines industry in the SDA fell slightly during the period under study. However, it is the third largest manufacturing industry in the SDA with employment of 13,700 during the third quarter of 1983. Statewide the industry is projected to grow by 35 percent between 1980 and 1990, and it should continue to be an important source of local jobs. The major growth occupations in this industry include electrical and electronic assemblers, electrical and electronic technicians, secretaries, computer programmers, electro-mechinical equipment assemblers, products/material testers, and systems analysts.

The Communication Equipment industry is expected to grow statewide by 7,650 jobs or 23.3 percent between 1980 and 1990. Within the SDA the industry exhibited a growth rate of 14 percent between the third quarter of 1981 and the third quarter of 1983. Jobs such as electronic assemblers, technicians, wirers, and testers are among the growth occupations.

Employment in the Electronic Components and Accessories industry increased by only 0.4 percent during the two year period to a total of 25,400 in the third quarter of 1983. However, it is the largest manufacturing industry in the SDA, and is projected to grow by 29 percent statewide between 1980 and 1990. The growth occupations in the industry include electrical and electronic assemblers, electrical and electronic technicians, secretaries, and electro-mechanical equipment assemblers.

Within the Wholesale Trade industry division, Electrical Goods , although numbering only 650 jobs has grown 18 percent from 1981 third quarter to 1983 third quarter. At the statewide level, electrical goods employment is expected to increase 35 percent by 1990. Some leading occupations within electrical goods such as secretaries and bookkeepers are not industry specific but span many industries. Also within the Wholesale Trade sector, Machinery Equipment and Supplies is expected to increase 47.6 percent over the 1980's. Leading occupations in this industry are secretaries and sales representatives,both technical and nontechnical.

Employment in Eating and Drinking Places grew 9 percent between third quarter 1981 and third quarter 1983. This industry represents 5.5 percent of all private sector jobs in the Metro South/West SDA. Employment projections for the 1980's show a 17 percent growth rate. Changing lifestyles, higher incomes, increasing female labor force participation and more leisure time contribute to people dining out more. Employment growth will be most pronounced in fast food restaurants. The leading occupations within eating and drinking places are industry specific and therefore, the fortunes of occupations such as waiter/waitress, fast food worker, cook and bartender are tied into the overall performance of this industry.

Personnel Supply Services has increased in the SDA by 14 percent from 1981 third quarter to 1983 third quarter. Statewide, the anticipated industry growth is nearly 40 percent through 1990. As demands for new personnel continue and the scarcity of qualified workers becomes more prevalent, the need for outside personnel services will increase.

The Computer and Data Processing Services industry numbered 10,450 jobs and increased 29 percent during the two year period under study. At the statewide level, computer and data processing services employment is expected to more than double by 1990. As technology continues to develop at a rapid pace, more and more businesses will need outside assistance in providing such services as data processing, computer programming, system design and analysis, consulting, and repair and maintenance of computer equipment. The most prevalent jobs in this industry are computer programmers and analysts.

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Miscellaneous Business Services is another growing industry in the Metro South/West SDA. As a result of a 23 percent increase in employment over the 1981 to 1983 period, employment is now over 12,000 workers. As the market place becomes more sophisticated and emphasis is placed on specialization, businesses will contract with firms for services that were formerly done within their company. Such contract services may include specialized consulting, business management, research and development, and protective services.

Within the Health Services Sector, Nursing and Personal Care Facilities increased eight percent between third quarter 1981 and third quarter 1983 and is expected to grow 6.8 percent by 1990. The leading occupations which are specific to the health service industry are licensed practical nurses and nurses aides/orderlies.

Hospitals which is projected to grow statewide by 30.4 percent increased by six percent from third quarter 1981 to third quarter 1983. Leading occupations in this industry include registered nurses, licensed practical nurses, nurse aides, therapists, clinical laboratory technologists and technicians, and psychiatric aides. Within hospitals, however, the adverse impact of Chapter 372, the new health cost containment legislation, could impede job growth among area health providers. Vocational education planners, will need to stay in contact with area hospitals in order to assess the on-going effects of Chapter 372.

III. Occupational Analysis

Twenty-four occupations which should provide good opportunities throughout the 1980's have been selected. Because of the economic prosperity of the SDA, a wider range of occupational choices exist for residents of the Metro South/West SDA than in many other SDA's.

Electronic Assemblers put together electrical and electronic equipment such as computers, calculators, missile control systems, and machine tool numerical controls. While not projected to grow as fast as many other occupations in the high technology sector, the growth rate for electronic assemblers should still double the statewide average. Over half of electronic assembly jobs are located in either the office computing machine or electronic component industries. Between 10 and 15 percent of jobs in these two industries are distributed among the various types of electrical, electronic, and electro-mechanical equipment assemblers. Employment prospects within these occupations will be affected by defense spending and changes in economic conditions.

Electronic Technicians develop, manufacture and service electronic equipment systems. Employment is expected to increase much faster than average, especially in the fields of computer and communication equipment. Opportunities will be best for graduates of post secondary training programs. During times of economic declines, however, inexperienced technicians may find it difficult obtaining jobs. Approximatgely one-third of employment is concentrated in the office computing machine and electronic component sectors.

Electro-Mechanical Equipment Assemblers put together, test and repair precision equipment such as gyros, gear trains, magnetic drums, and tape and punched-card readers, which are used in a variety of automated and electronic systems. Employment growth in the occupation is expected to exceed the average, with additional openings occurring due to traditionally high job turnover. Robot technology is not expected to impact these assembly jobs adversely in the near future, however, these positions have always been very sensitive to changes in business conditions with layoffs likely during periods of economic decline.

Electronic Wirers insert wiring into electrical end products, such as calculators, according to blueprints, drawings, prescribed wiring procedures and instructions. Employers generally look for high school graduates, and preference is often given to those with a background in relevant skills, e.g., blueprint reading. Manual dexterity and good eyesight, including color vision are essential. Although employment is expected to grow at a faster than average rate, these positions are very dependent upon business conditions, with fewer openings available during periods of economic decline.

Product/Material Testers examine and evaluate parts, products, or other manfactured materials to determine whether the item in question meets quality and performance standards. Although formal post secondary training is not usually required, employers often look for high school graduates who have some technical skills and experience with technical products. Approximately 50 percent of employment is concentrated among three industries: office computing machinery, electronic components, and communications equipment. As these industries prosper, the outlook for the occupation should remain favorable.

Sales Representative (technical and non-technical) are responsible for presenting manufacturers' products to buyers in the market. They must be familiar with both the product line and their customers' needs. Sales representatives sell to wholesalers, retailers, government agencies, original equipment manufacturers, hospitals and schools. Technical sales representatives deal with complex products, such as advanced electronic machinery or industrial equipment and supplies. Sales ability and good communication skills are the most important qualities employers look for when hiring representatives, although they prefer individuals trained in a relevant technical field for presenting technically complex products. Although projected to grow at an average pace, most opportunities for sales representatives will arise from the need to replace individuals who find themselves ill suited to the competitive demands of selling.

General Office Clerks have varied duties which usually include a combination of bookkeeping, typing, office machine operating, and filing. While employment is expected to grow more slowly than the average for all occupations, the number of annual openings wil be substantial due to the large size of this occupational group and because of high turnover and replacement demands. As business expansion creates increases in the volume of paperwork, demand will persist for general office clerks to handle the necessary communications flow. General office clerks are employed in many industries such as schools, government, hospitals, insurance, banking, brokerage services, and grocery stores.

Sales Clerks work in either retail stores, such as department stores, grocery stores and the like, or in wholesale establishments. They are primarily responsible for selling goods to customers. Sales clerks total bills, receive payments, make change, wrap merchandise, and stock shelves. Training is provided on the job and part-time positions are frequently available. Although employment of sales clerks is expected to show slower than average growth, the large size of this occupation and traditionally high job turnover will create numerous openings each year.

Secretaries perform a variety of administrative and clerical duties and are found in virtually all business and industrial settings. Some secretaries such as legal and medical secretaries perform highly specialized work. The occupation is expected to generate 20,000 new jobs during the 1980's, 5,000 more than the next highest occupation. While the projected growth rate in Massachusetts is high, the size of the occupation alone should generate many more job opportunities. Technololgical improvements in office equipment will continue to change the work environment but will not reduce the demand for skilled personnel. Job prospects are excellent for those with typing experience, word processing skills and organizational abilities.

Bookkeepers ensure that the financial records of a firm are complete, accurate and up-to-date. They work with invoices, ledgers, vouchers, and bank balances and use adding machines and calculators; some also use business or personal computers. Employment of bookkeepers is expected to post an average growth rate, although many additional openings will be created by turnover. The computerization of bookkeeping and accounting procedures and the introduction of programmable calculators and personal computers is changing the nature of the job for a large proportion of these workers.

Cashiers are responsible for handling the money that comes into an enterprise. In supermarkets and large department stores cashiers spend long periods standing at checkout counters processing customer purchases of store items. Employment of cashiers is expected to grow at a slightly above average rate. The widespread use of automated checkout systems such as those in supermarkets may slow growth, but many more jobs will be created as a result of high job turnover. Nearly half of all cashiers are employed in grocery stores with another 20 percent employed among department stores, drug stores, and eating and drinking places.

Waiters and Waitresses take customer orders, serve food and beverages, make out checks and take payments. The occupation will generate 11,000 new jobs in Massachusetts during the 80's the third highest. People dining out more and opportunities for part-time work should contribute to rising employment levels. Many more positions will become available because of the high turnover nature of the position.

Fast Food Preparation Workers are employed in restaurants where menus are generally limited to a few primary items. Employment in this occupation will grow at a nearly 50 percent rate between 1980 and 1990. These occupations have very high turnover rates and offer many part-time openings. With changing demographics leading to a sharp drop in the number of teenaged youth, job openings could be quite high.

Cooks are in charge of food preparation, though their specific duties vary depending upon the size of the establishment. The demand for cooks and chefs will rise as people dine out more often. Areas exhibiting growing population will likewise generate increased opportunities. Persons who have had courses in food preparation will have an advantage in competing for the more lucrative jobs in large restaurants.

Bartenders mix and serve both alcoholic and non-acoholic drinks. They must know how to measure and mix a number of standard drinks, but also know how to tailor drinks to a customer's specifications. Bartenders must be of legal drinking age. Employment of bartenders is expected to show faster than the average growth, with many openings resulting from the occupation's traditionally high turnover. Opportunities will occur in areas experiencing population growth and as spending on food and beverages outside the home continues to increase.

Computer Programmers write detailed instructions that list in a logical order the steps that a computer must follow to organize data, solve a problem, or do some other task. Employment is expected to grow by nearly 50 percent throughout the decade as computer usage expands. Prospects will be best for college graduates in computer science and related fields but opportunities should also be good, primarily in business settings, for those with less formal education. Beginners may experience some difficulty landing a first job, particularly during a slow economy. Forty percent of computer programmers are employed in either the computer and data processing services or office computing machinery industries.

Systems Analysts plan efficient methods for processing data to solve complex problems. They usually specialize in either business or scientific and engineering applications. Employment in Massachusetts is projected to grow at nearly 75 percent as computer capabilities are increased and computers are used to solve a wide variety of problems. The best prospects will exist for college graduates of computer science or related curricula. Oppportunities will also be very good for those graduates with courses in programming and systems analysis, and training and experience in applied fields. Nearly 20 percent of systems analysts jobs are located in computer and data processing services while an equal number exist within two manufacturing industries: office computing machinery and electronic components.

Computer and Peripheral Equipment Operators control and tend computers used to process data and run the machines used along with computers. Demand should be quite high for these occupations, however, employment of data entry operators should decline as more efficient direct entry techniques are adopted. Computer equipment operators are employed in a wide variety of industries. Persons with formal computer training and experience will have an advantages.

Security Guards protect property at commercial, industrial, and government centers, as well as public buildings such as banks, art galleries, and museums. Employment will grow rapidly through the 80's as concern increases over crime and vandalism. Over half of employment is concentrated within miscellaneous business services, namely protective security agencies. Opportunities will be best for those seeking work on night shifts.

Nurse Aides work under the direction of physicians and nurses caring for sick and injured patients. The increasing demand for health care of a longer living population should accentuate long term demand. Approximately half of all nurse's aides work in nursing homes and other long-term care facilities. Another one-third of nurse aide positions occur in hospitals. Employment is expected to grow by nearly 20 percent but many additional positions will become available due to high job turnover.

Psychiatric Aides, also called mental health aides or mental health technicians, assist in the care of patients in psychiatric hospitals, in state facilities, and in community health centers or group homes. Employment of psychiatric aides is expected to grow at a faster than average rate. Those who have received formal training will have an advantage in obtaining or advancing into supervisory positions.

Licensed Practical Nurses (LPN's) work under the supervision of physicians and registered nurses to help care for the physically or mentally ill. They train in programs which generally last one year and which include both classroom study and clinical practice. Employment of LPN's is projected to grow at over 20 percent as the demand for health care continues to grow rapidly. There will be a need for practical nurses to care for the growing elderly population, to provide additional health care that results from expansion in public and private health insurance plans, and for private duty nursing. Approximately 60 percent of LPN's work in hospitals and 23 percent in nursing and personal care facilities.

Registered Nurses (RN's) perform a wide variety of health care functions. While programs for registered nurses vary in length from two to five years, the best opportunities will be for those holding bachelor's degrees. Employment of registered nurses is projected to grow by 30 percent as demand will be accentuated by the growing need for specialized nursing skills in emergency and operating room procedures, and to provide services for our rapidly increasing number of elderly people. Despite the recent trends toward cost containment, RN's will still be needed because of the complexity of hospital based medical procedures and equipment, and because of the rapid growth of clinics, emergency centers, and other health care facilities. Nearly two out of every three registered nurses are employed in hospitals.

Medical/Clinical Laboratory Technologists and Technicians perform tests for use in the diagnosis, evaluation, and treatment of disease. Employment for these supportive laboratory technologists and technicians is expected to grow by more than 30 percent as medical practitioners expand their use of such services in routine physical checkups and as tests continue to become more specialized and complex. The health care needs of a growing and aging population, greater health consciousness, and the greater availability of public and private health care programs will contribute to employment growth.

Metro South/West (SDA)

Growth Industries

Office and Computing Machines
Communication Equipment
Electronic Components and Accessories
Electrical Goods,Wholesale
Machinery Equipment and Supplies, Wholesale
Grocery Stores
Eating and Drinking Places
Personnel Supply Services
Computer and Data Process Services
Miscellaneous Business Services
Nursing and Personnel Care Facillities
Hospitals

Growth Occupations

Electronic Assemblers
Electro-Mechanical Equipment Assemblers
Electronic Technicians
Electronic Wirers
Product/Material Testers
Sales Representatives
General Office Clerks
Sales Clerks
Secretaries
Bookkeepers
Cashiers
Waiter/Waitress
Fast Food Preperation Workers
Cooks
Bartenders
Computer Programmer
Systems Analysts
Computer and Peripheral Equipment Operators
Security Guards
Nurses Aides
Psychiatric Aides
LPN's
Registered Nurses
Clinical/Laboratory Technologists and Technicians

TABLE #
UNEMPLOYMENT RATES FOR THE
METRO SOUTH/WEST
SERVICE DELIVERY AREA,
MASSACHUSETTS, and UNITED STATES

PERIOD	SDA	MASSACHUSETTS	UNITED STATES
1981 Annual Average	4.4	6.4	7.6
1982 Annual Average	5.1	7.9	9.7
1983 Annual Average	4.4	6.9	9.6
1982			
JANUARY	5.1	8.0	9.4
FEBRUARY	5.4	8.3	9.6
MARCH	4.9	7.6	9.5
APRIL	5.1	8.0	9.2
MAY	5.6	8.6	9.1
JUNE	6.0	9.0	9.8
JULY	6.1	9.6	9.8
AUGUST	5.1	7.6	9.6
SEPTEMBER	4.8	7.4	9.7
OCTOBER	4.8	7.2	9.9
NOVEMBER	4.1	6.5	10.4
DECEMBER	4.3	7.1	10.5
1983			
JANUARY	5.3	8.7	11.4
FEBRUARY	5.0	8.2	11.3
MARCH	5.0	8.0	10.8
APRIL	4.2	6.7	10.0
MAY	4.2	6.5	9.8
JUNE	5.0	7.5	10.2
JULY	4.0	6.2	9.4
AUGUST	3.9	6.0	9.2
SEPTEMBER	4.6	7.0	8.8
OCTOBER	4.2	6.4	8.4
NOVEMBER	3.5	5.6	8.1
DECEMBER	3.5	5.8	8.0
1984			
JANUARY	4.5	7.3	8.8
FEBRUARY	3.9	6.3	8.4
MARCH	3.6	5.8	8.1
APRIL	3.2	5.0	7.6

SOURCE: Local Area Unemployment Statistics Program
Figures not adjusted for seasonality.